



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,774	02/24/2004	Sung-Jun Moon	P-0644	8342

34610 7590 05/23/2006

FLESHNER & KIM, LLP
P.O. BOX 221200
CHANTILLY, VA 20153

EXAMINER

SHEDRICK, CHARLES TERRELL

ART UNIT PAPER NUMBER

2617

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,774

Applicant(s)

MOON, SUNG-JUN

Examiner

Charles Shedrick

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 2617

DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims **1-40** are rejected under 35 U.S.C. 102(b) as being anticipated by Wiedeman et al. US

Patent 6,272,316 B1, “Wiedeman”, hereinafter.

Consider **claim 1**, Wiedeman teaches a mobile terminal **13** (i.e., **see figures**), comprising: a memory (i.e., **see col. 10 line 19**); a display unit **13a** (i.e., **see figure 1A and other figures showing display unit**); a direction measurement unit which periodically measures a direction of the mobile terminal (i.e., the direction measurement unit is inherently built into the user terminal)(i.e., **see abstract, col. 1 lines 55-65, col. 2 lines 44-51**); a received signal strength indicator which measures a received signal strength (i.e., **see col. 8 lines 42-49, col. 10 lines 21-31**); and a controller **13g**(i.e., **computer module**) which controls the memory to store a newly-measured direction of the mobile terminal and a corresponding received signal strength when the mobile changes direction (**claim 32,33,col.12 lines 5-12, col. 13 line 15, col. 14 line 48, col. 16 line 14**) and controls the display unit to display a receiving sensitivity graph which indicates the newly measured direction and corresponding signal strength (**claim 32,33, col.12 lines 5-12, col. 13 line 15, col. 14 line 48, col. 16 line 14**).

Consider **claim 6**, Wiedeman teaches a method for displaying a receiving sensitivity in a mobile terminal (i.e., the mobile terminal **13** has a display **13a** for displaying representations to the operator)(i.e., see **abstract, col.3 lines 20-26, lines 50-56**), comprising: periodically checking a direction of a mobile terminal (**col. 2 lines 44-46, col. 4 lines 21-28, col. 6 lines 44-47, col. 7 lines 30-32, col. 9 lines 25-33, lines 60-65, etc.**); measuring a received signal strength of a new direction when the mobile terminal changes direction(i.e., see at least **col. 8 lines 42-49, col. 10 lines 21-31**); storing information indicative of the new direction and received signal strength in a memory(i.e., see at least **col. 4 lines 11-48, col. 7 lines 19-24, col. 10 lines 1-43, col. 11 line 12 and col. 12 line 15**); and displaying a receiving sensitivity graph which includes the new direction and received signal strength of the terminal(i.e., see at least **abstract , col. 3 lines 11-62, and col. 8 lines 57-59**).

Consider **claim 9**, Wiedeman teaches a method, comprising: measuring a current direction and received signal strength of a mobile terminal (i.e., see at least **col. 8 lines 42-49, col. 10 lines 21-31 in addition to abstract and summary of invention**); and displaying the current direction and received signal strength on the terminal (i.e., see at least **abstract, col. 3 lines 11-62, and col. 8 lines 57-59 in addition to abstract and summary of invention**).

Consider **claim 21** Wiedeman teaches a method, comprising: measuring received signal strengths of a mobile terminal in a plurality of directions (i.e., see at least **col. 7 lines 47-58, col. 9, col. 11 lines 4-12, in addition to abstract and summary of invention**); and displaying the received signal strengths in said directions simultaneously on the terminal (i.e., see at least **col. 7 lines 47-58, col. 9, col. 11 lines 4-12 in addition to abstract and summary of invention**).

Consider **claims 24,36 and 39**, Wiedeman teaches mobile terminal **13** (i.e., see **figures**),

Art Unit: 2617

and computer readable medium comprising: a detector that detects a current direction and received signal strength of the terminal (**i.e., see various components of illustrated figures used in combination or alone to accomplish the task of detecting. Also see at least col. 3 lines 12 –27, col. 11 lines 41-47**); and a display which displays the current direction and received signal strength detected by the terminal (**i.e., see at least col. 3 lines 12 –27, col.11 lines 41-47**).

Consider **Claim 2 and as applied to the terminal of claim 1**, Wiedeman teaches wherein the controller 13g (**figure 6**) controls the memory to store the newly-measured direction and corresponding received signal strength when a direction conversion angle of the terminal changes by more than a predetermined threshold value relative to a previous direction of the terminal (**i.e., at least col.12 lines 5 –18**).

Consider **Claim 3 and as applied to the terminal of claim 1**, Wiedeman teaches wherein the receiving sensitivity graph displays the newly measured direction and corresponding received signal strength of the mobile terminal and at least one of a previous direction and received signal strength of the terminal recorded in the memory (**i.e., see at least figures 9a and 9b col. 7 lines 11-24**).

Consider **Claim 4 and as applied to the terminal of claim 1**, Wiedeman teaches wherein the display unit displays a received signal strength indicator bar (**col. 8 line 42-45, and lines 57-62**).

Consider **Claim 5 and as applied to the terminal of claim 1**, Wiedeman teaches wherein the receiving sensitivity graph displays the newly measured direction of the mobile terminal and corresponding receiving signal strength with a predetermined angle on a horizontal axis denoting east and west directions and a vertical axis denoting south and north directions(**i.e.,**

see at least figures 9a and 9b col. 7 lines 11-24).

Consider **Claim 7 and as applied to the terminal of claim 6**, Wiedeman teaches wherein measuring the received signal strength comprises: checking whether a direction conversion angle exceeds a threshold value when the mobile terminal changes direction (**i.e., see at least figures 9a and 9b col. 7 lines 11-24**); and measuring a received signal strength of the changed direction when the angle exceeds the threshold value (**i.e., see at least figures 9a and 9b col. 7 lines 11-24**).

Consider **Claim 8 and as applied to the terminal of claim 6**, Wiedeman teaches wherein the receiving sensitivity graph also displays at least one of a previous direction and signal strength of the terminal (**i.e., see at least figures 9a and 9b col. 7 lines 11-24**).

Consider **Claims 10 and 25 and as applied to the terminal of claim 9 and 24**, Wiedeman teaches wherein said measuring includes: taking a difference between the current direction and a previous direction of the terminal (**i.e., obstructed path versus an unobstructed path as seen in at least col. 11 lines 41-46**); comparing the difference to a threshold value (**i.e., in order to determine quality in terms of best and better then inherently there must be a threshold**); and measuring the received signal strength only when the difference exceeds the threshold value (**i.e., providing a better path when signal strength exceeds the ability to hold a call**)(**i.e., at least col. 9 lines 7-59**).

Consider **Claim 11 and 26 and as applied to the terminal of claim 9 and 24**, Wiedeman teaches the claimed invention further comprising: taking a difference between the current direction and a previous direction of the terminal (**i.e., obstructed path versus an unobstructed path as seen in at least col. 11 lines 41-46**); comparing the difference to a threshold

value (i.e., in order to determine quality in terms of best and better then inherently there must be a threshold), wherein the current direction and received signal strength are displayed only when the difference exceeds the threshold value (i.e., see at least **col. 11 lines 41-47** wherein the user can enter via a display menu prompt the criteria of the display).

Consider **Claims 12 and 27 as applied to the terminal of claim 9 and 24**, Wiedeman teaches wherein said displaying includes: displaying the current direction and received signal strength in a graph (**col. 8 line 42-45, and lines 57-62 and at least figure 9a and 9b**).

Consider **Claims 13 and 28 and as applied to the terminal of claims 12 and 27**, Wiedeman teaches wherein the graph includes a pointer which indicates the current direction of the terminal (**col. 9 lines 1-5 and at least figures 2-5, 9a and 9b**).

Consider **Claims 14 and 29 and as applied to the terminal of claims 13 and 28**, Wiedeman teaches wherein a length of the pointer indicates the received signal strength of the terminal in the current direction (i.e., see at least **col. 9 lines 1-5 and at least figures 2-5, 9a and 9b**).

Consider **Claims 15 and 30 and as applied to the terminal of claims 9 and 24**, Wiedeman teaches wherein said displaying further includes: displaying at least one of a previous direction and received signal strength of the terminal (i.e., see at least **figures 2-5, 9a and 9b and col.7 lines 25 -46**).

Consider **Claims 16 and 31 and as applied to the terminal of claims 15 and 30**, Wiedeman teaches wherein said at least one of a previous direction and received signal strength are displayed simultaneously with the current direction and received signal strength (i.e., see at least **figures 2-5, 9a and 9b and col.7 lines 25 -46**).

Consider **Claims 17 and 32 and as applied to the terminal of claims 9 and 24**,
Wiedeman teaches wherein said displaying includes: displaying a graph having a first data point representing the current direction and received signal strength and a plurality of additional data points representing previous directions and corresponding received signal strengths (i.e., see at least **figures 2-5, 9a and 9b and col.7 lines 25 -46**).

Consider **Claims 18 and 33 and as applied to the terminal of claims 17 and 32**,
Wiedeman teaches wherein the first and additional data points are connected to form an area graph which provides a visual indication of a direction in which a strongest received signal strength exists for the terminal (i.e., see at least **figures 2-5, 9a and 9b and col.7 lines 25 -46**).

Consider **Claims 19 and 34 and as applied to the terminal of claims 9 and 24**,
Wiedeman teaches displaying an area graph at least partially based on the current direction and signal strength, wherein the area graph includes a peak which indicates a direction in which a strongest received signal strength exists for the terminal (i.e., see at least **figures 2-5, 9a and 9b and col.7 lines 25 -46**).

Consider **Claims 20 and 35 and as applied to the terminal of claims 19 and 34**,
Wiedeman teaches wherein the current direction and received signal strength is different from the strongest received signal strength (i.e., user terminal in an area obstructing line of sight see at least **see at least figures 2-5, 9a and 9b and col.7 lines 25 -46**)

Consider **Claim 22 and 37 and as applied to the terminal of claims 21 and 36**,
Wiedeman teaches wherein said displaying includes: displaying an area graph representing the received signal strengths in said directions(i.e., see at least **figures 2-5, 9a and 9b and col.7 lines 25 -46**).

Consider **Claims 23 and 38 and as applied to the terminal of claims 22 and 37**, Wiedeman teaches wherein said displaying includes: identifying a current direction and received signal strength of the terminal on the graph (i.e., see at least **figures 2-5, 9a and 9b and col.7 lines 25 -46**).

Consider **Claim 40 and as applied to the computer-readable medium of claim 39**, Wiedeman teaches wherein the medium is an integrated circuit chip (i.e., col. 5 line 38 see figure 6 or figure 7).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Shedrick whose telephone number is (571)-272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kincaid Lester can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Shedrick

Application/Control Number: 10/784,774

Page 9

Art Unit: 2617

AU 2617

5/16/06

Nick Corsaro

NICK CORSARO
PRIMARY EXAMINER